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B O C A G I A N A

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A NEW SPECIES OF LAEMONEMA FROM THE NORTHEASTERN ATLANTIC (PISCES : MORIDAE)

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With 1 figure and 1 table

SUMÁRIO. No presente trabalho é descrita uma nova espécie para a ciência, *Laemonema curtipes* n. sp., colhida no Banco Seine (Oceano Atlântico nordeste). São também fornecidos alguns dados sobre as outras espécies deste género assinaladas anteriormente para a área bem como discutidas as afinidades da nova espécie.

SUMMARY. A new species of ~~Eretmophoridae~~ Moridae : *Laemonema curtipes*, is described from a specimen collected in ca. 220 m depth at the Seine Seamount (33°45'.8N, 14°20'.6W).

The genus *Laemonema* Johnson, 1862 has a world-wide distribution and as far as we know comprises 15 species (Markle & Melendez, 1988 and Paulin, 1989). Of all these only 4 were recorded from the eastern Atlantic : *L. latifrons* Holt & Byrne, 1908, in the sub-arctic and temperate north-eastern Atlantic (Cohen, 1986a) and Mediterranean (Matallanas, 1985) ; *L. robustum* Johnson, 1862, with verified records only from Madeira (Maul, 1952) ; *L. yarrellii* Lowe, 1841, with verified records only from Madeira and the Canaries (A. Brito, *pers. comm.*) and listed but not confirmed by us from Senegal and Guinea regions (Ehrich, 1977) and *L. laureysi* Poll, 1953, known from Namibia up to Guinea (Cohen, 1986b).

Vaillant (1888) gives a brief description of 29 specimens that he identified as *L. robustum* Johnson taken on the Moroccan coast and the Cape Verde Islands. Maul (1952) already pointed out several differences in the meristic characters between his specimens of *L. robustum* and

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Vaillant's, and did not consider that the latter could belong to *L. robustum* Johnson. Furthermore, the description of the colouration given by Vaillant — "les nageoires dorsale et anale liserées de noir" — does not agree with the colouration of *L. robustum*, being closer to that of *L. yarrellii*. Nothing more can be said without seeing Vaillant's specimens, but in view of the above we believe that they belong to a species other than *L. robustum* Johnson — perhaps to *L. yarrellii* or to an even undescribed new species very close to it.

Judging by the number of specimens belonging to the genus *Laemonema* which, to our knowledge, have been caught in the NE Atlantic between 45°N and 25°N, *L. yarrellii* seems to be the most abundant : 23 specimens from the Great Meteor Seamount (Maul, 1976, Ehrich, 1977) and 1 specimen from Madeira (Maul, 1976). The other 3 or 4 species (including the one described below) can be considered rare, *L. robustum* : Apart from the holotype at the BMNH 5 further specimens from Madeira, in the collection of the MMF, Vaillant's species : 1 specimen from off Agadir, Morocco and our new species with only one specimen from the Seine Seamount.

Lozano *et al.* (*in press*) record *L. laureysi* for the first time from the Canaries (1 specimen, 135 mm SL) caught off Lanzarote). This specimen was reexamined and was confirmed to be *L. yarrellii* (A. Brito, pers.comm.).

METHODS

Methods for measurements follows Hubbs & Lagler (1958) and Maul (1976). Vertebrae and first dorsal-fin counts are based on radiographs. Vertebrae counts do not include ural centra. The gill raker in the angle of the arch is considered part of the lower series and tubercle-like rakers are not included in the gill raker count. Abbreviations of names of institutions follow Leviton *et al.* (1985).

Laemonema curtipes n. sp.

Fig. 1

Type material. Holotype : MMF 23858, 189 mm SL, Seine Seamount, N/E NORUEGA, cruise No. 02010485, St. 30 (33°45'.8N, 14°20'.6 W), in a fish trap, ca. 220 m depth, April 29, 1985.

Diagnosis. A broad-headed light coloured species of *Laemonema* with very short pelvic fins, 6 first dorsal-fin rays, 62 second dorsal-fin rays, 59 anal-fin rays, 21-23 pectoral-fin rays, 5 + 14 gill rakers, 56 vertebrae and ca. 140 lateral-line scales.

Description of the holotype. Body and tail compressed laterally. Head (21.1% SL) about as broad as it is deep. Eyes

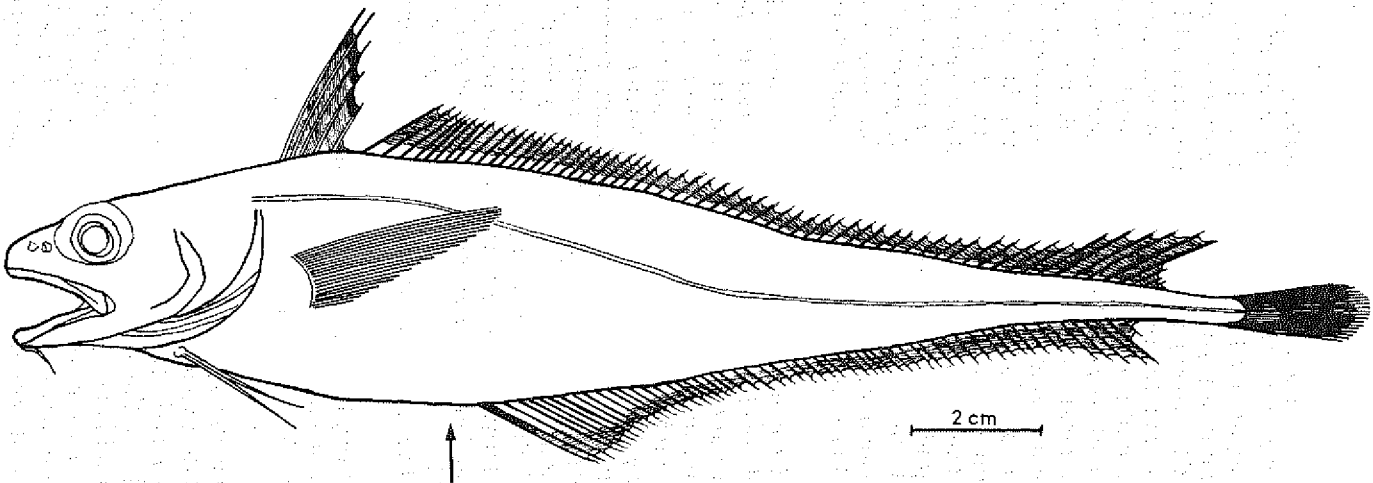

Fig. 1. — *Laemonema curtipes* n. sp.

large (31.5% HL). Mouth large, maxillary reaching beyond a vertical through the centre of the eye. Nostrils just in front of eyes. Anterior nostrils consisting of very thin tubes with posterior border elevated. Posterior nostrils with delicate flap-type membrane anteriorly, covering almost half of their apertures. Gill rakers slender, pointed and with minute teeth along the inner borders, the longest 2.5 times in the diameter of orbit (10.5% HL). One tubercle-like raker on anterior part of upper arch and two on the anterior part of lower one. Pseudobranchiae in a skin pocket open anteriorly. Scales small, cycloid, present on body, upper part of head, under the eyes and lower jaw. Snout naked except for the region between nostrils. Length of caudal peduncle (6.3% SL) almost 2.5 times its depth. First dorsal-fin moderately high, with the first very short ray hidden under the skin, the second being the highest and the following 4 decreasing in length gradually, the last being aproximatelly 2.5 times shorter than the second. Pelvics with 2 rays close together for more than half of their length. Second dorsal-fin and anal-fin long and low, except at the beginning and at the end. Pectoral-fins and caudal normal, the latter with its outline convex.

Origin of first dorsal slightly in advance of origin of pectoral-fins and close behind end of head. Origin of second dorsal-fin separated from end of first dorsal by a very short distance. Origin of anal-fin under 10th dorsal-fin ray and its end distinctly in advance of end of base of second dorsal (base of last ray under base of 5th ray counted from last ray). End of pectorals only slightly beyond origin of anal. Pelvics very short (9.5% SL) reaching to under base of pectorals. Anus black, surrounded by two oval rims, the inner one whitish and the outer blackish. The vent is at a distance from the origin of the anal fin equalling about 1.5 times the longitudinal diameter of the outer blackish rim. Lateral line straight until under origin of second dorsal, then curving gently downwards until middle of depth of body at about half of total length, from where continuing in a straight line until reaching the end of the caudal peduncle. Barbel length slightly more than half the diameter of orbit. For proportions and meristic values see Table 1.

Teeth small, villiform in bands along upper and lower jaws, increasing in length from the inner bands to the outer ones and towards the symphysis of the upper jaw. An oval patch of small teeth on vomer and none on palatines.

Colour on body on the specimen preserved in alcohol more or less uniform light yellowish-brownish, slightly darker on head and belly. A distinct well marked blackish band along the second dorsal and anal-fin occupy about two thirds of the outer width in the former's anterior half, from where its width gradually increases until almost covering the entire fin in its hindmost one quarter. The same applies to the anal-fin, only that there, in the whole anterior, much wider part, the blackish colouration fades into greyish-brownish white. The distal edges of these fins consist

Table 1. — Proportions and counts of *Laemonema curtipes* n. sp., *L. yarrellii* and *L. robustum*.

	L. curtipes n. sp.	L. yarrellii (2 specim.)	L. robustum (5 specim.)
SL (mm)	189.0	140 - 156	274 - 319
% OF STANDARD LENGTH			
Head	21.1	22.0	25.9 - 28.7
Snout	5.8	6.0 - 7.0	6.9 - 7.7
Diameter of orbit (max.)	6.6	7.0 - 7.5	5.2 - 5.6
Upper jaw	10.3	10.5 - 11.0	13.8 - 14.5
Greatest depth of maxillary	2.1	2.5 - 3.0	2.8 - 4.0
Width of head	12.4	13.0 - 13.0	17.1 - 19.4
Interorbital width	3.2	4.0 - 4.0	5.3 - 5.8
Length of barbel	2.6	4.5	4.1 - 4.7
Pre-dorsal 1 length	23.8	23.0 - 24.5	28.4 - 30.7
Pre-dorsal 2 length	29.9	29.0 - 29.5	33.2 - 36.6
Pre-pectoral length	22.7	22.0 - 23.0	29.5 - 30.9
Pre-pelvic length	16.4	17.0 - 17.5	25.0 - 27.7
Pre-anal length	41.7	38.0 - 39.0	43.7 - 48.3
Body depth at origin of D1	18.5	19.0 - 21.0	25.5 - 27.7
Body depth at origin of D2	20.1	21.0 - 22.0	26.9 - 28.3
Body depth at origin of Anal-fin	19.2	20.5 - 21.0	23.7 - 26.1
Least depth of caudal peduncle	2.6	2.0	2.9 - 2.4
Height of first dorsal (maximum)	17.4	21.5 - 24.1	15.4 - 22.2
Length of first dorsal	5.0	4.5 - 5.6	4.3 - 4.7
Length of second dorsal	67.1	67.9 - 70.9	60.3 - 63.3
Length of pelvics	9.5	20	26.4 - 31.0
Length of pectorals	17.4	17.5 - 18.5	18.4 - 20.3
Longest gill raker	2.1	3	1.9 - 2.5
Length of pyloric coeca	—	ca. 6.0 - 7.0	13.2
MERISTIC VALUES			
First dorsal	6	5	6
Second dorsal	62	59 - 60	51 - 54
Anal	59	57	46 - 49
Pectorals	21 - 23	24 - 25	26 - 30
Pelvics	2	2	2
Gill rakers	5 + 14	6 + 15 - 16	5 + 13 - 14
Branchiostegals	7	7	7
Pyloric coeca	—	10 - 11	—
Scales at lateral line	ca. 140		ca. 126 - 135
Vertebrae	56	—	49

of a very narrow whitish band. The tail-fin is for the greater part of the same black as the darker parts of the dorsal and anal fins but ends in a fairly broad pure white edge at its tip, and inner rays are whitish at their origin. The paired fins are uniform greyish-brownish white.

Inside of mouth whitish and throat blackish. Gill cavity dark brown to blackish except for the inner part of opercles which are whitish. Peritoneum black, showing through the body wall at the upper posterior part of the abdominal cavity. Iris whitish.

Ethimology. The species is named *curtipes* in reference to the very short pelvic-fins.

AFFINITIES

The present species seems to be closely related to *Laemonema yarrellii* in having a very similar colouration of the body and fins, though in the former this colouration is more distinctly marked. Proportions of the body and meristic values are likewise very similar. The new species at glance by the proportionally greatly inferior length of the pelvic-fins and can be distinguished from all eastern Atlantic species so far known at a further differs from *L. yarrellii* by the shorter chin barbel, the greater pre-anal length, lower dorsal-fin, longer caudal peduncle and lower number of gill rakers in both parts of the first gill arch. From *L. robustum* it differs in having much shorter pelvics, a shorter and narrower head, smaller chin barbel, greater length of the second dorsal-fin, higher counts of gill rakers as well as of second dorsal- and anal-fin. The colouration of both species is also a good distinguishing character, *L. robustum* being dark brown with a slightly mauve hue on body, head and all fins except the pelvics (Maul, 1952).

GENERAL REMARKS

On re-examining the specimens of *L. yarrellii* described by Maul (1976 : 36 & 37, fig. 17) it has been found that "one ray" given for pelvics is incorrect and should have been given as two. According to Paulin (1989 : 245, table 1) all species of *Laemonema* have two or more pelvic-fin rays.

It was not possible to find a first hidden ray on dorsal one on the specimens of *L. yarrellii* in the collection of MMF as we found in our new species and in *L. robustum* with the aid of a radiograph.

In one of the specimens of *L. robustum* in the collection of MMF we were able to count 30 pectoral-fin rays which is higher than the maximum given for the genus by Paulin (1989).

KEY TO THE EASTERN ATLANTIC SPECIES OF *LAEMONEMA*

(Adapted from Cohen, 1986a)

1a First dorsal fin with 1 or more rays that are notably longer than any rays in second dorsal 2
1b First dorsal fin with one short elongated filament or none at al ... ... *L. latifrons.*
2a Pelvic-fins reaching or exceeding origin of anal-fin 3
2b Pelvic-fins greatly reduced (10% SL) their ends only slightly exceeding a vertical line through the origin of pelvics ... ... *L. curtipes* n. sp.
3a Gill rakers 5-6 + 13-16 4
3b Gill rakers 7-8 + 18-20 ... ... *L. laureysi*
4a Gill rakers 5 + 13-14, second dorsal-fin rays 51-52 and anal-fin rays 46-49 ... ... *L. robustum.*
4b Gill rakers 6 + 15-16, second dorsal-fin rays 59-61 and anal-fin rays 57-61 ... ... *L. yarrellii.*

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NOTES ON TWO MADEIRA PLANTS

By N. C. H. Krauss [1]

The composite plant «Abundância» (*Eupatorium adenophorum* Spreng.) has been known in Madeira for many years. On July 24, 1962 I collected a second species of *Eupatorium*, *E. riparium* Schultz-Bip., confirmed by the Royal Botanic Garden, Kew, England. This was growing in association with *E. adenophorum* in a damp area along a path near Monte. Both these species of *Eupatorium* are native to Mexico. I have seen *E. riparium* growing along a small stream in a ravine at the Desierto de los Leones, Distrito Federal, in the hills above Mexico City. Both species are pests in grazing land in Hawaii.

On November 7, 1960 I collected specimens of *Ulex minor* Roth (determined by Royal Botanic Garden, Kew) in the grassy hills above Ribeiro Frio. Since then I have seen it also at Encumeada and Santo da Serra. *Ulex europaeus* L. has been known in Madeira for a long time, but I have not seen any records of *U. minor*.

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